UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

DEPARTMENT OF VEGETABLE CROPS
DAVIS, CALIFORNIA

June 5, 1958

Dr. Joshua Lederberg
Department of Medical Genetics
Genetics Building
University of Wisconsin
Madison 6, Wisconsin

Dear Dr. Lederberg:

The work of Winkler on Burdos has been continued by one of his students, Brabec. I know of two papers published by him recently, which are as follows:

Brabeck, F., 1949. Zytologische Untersuchungen an den Burdonen Solanum nigrum lycopersicum. Planta 37, 57-95.

Brabec, F., 1954. Untersuchungen über die Natur der Winklerschen Burdonen auf Grund neuen experimentellen Materials. Planta 44, 562-606.

I am not completely satisfied with their evidence of synkaryosis in this material. These Burdos have been characterised by a high degree of somatic instability, somatic figures from the same plants exhibiting a wide range of chromosome numbers. The plants are furthermore weak and highly sterile. I am not entirely sure that they have ruled out the possibility of these being persistant chimeras of some type in which the interaction between the cells of the two parent species would cause the sterility and somatic instability.

It is a rather simple matter to make grafts between tomato and nightshade and I suspect it is probably not too difficult to induce the formation of chimeral shoots from the region of the graph. A very serious difficulty is the inclusion of tobacco mosaic and other virus diseases, which can also be responsible for chromosomal misbehavior.

Sincerely,

Charles M. Rick,
Professor of Vegetable Crops

CMR/vnb

RICK, C.M.